

## Abstract

A waveguide orthomode transducer includes a first radio wave conducting means for conducting an electric wave of a horizontally polarized wave branched by an electric wave branch means, for conducting another electric wave of the horizontally polarized wave, for combining the electric waves of the horizontally polarized wave into one electric wave and dividing this electric wave into an electric wave of a basic mode and an electric wave of a higher mode, and for outputting them, and a second radio wave conducting means for conducting one electric wave of a vertically polarized wave branched by the electric wave branch means, for conducting another electric wave of the vertically polarized wave, for combining the electric waves of the vertically polarized wave into one electric wave and dividing this electric wave into an electric wave of a basic mode and an electric wave of a higher mode, and for outputting them.